



Flood damaged pianos.

In the wake of the 2011 Australian floods the following may be helpful to piano owners, piano technicians and insurance companies on how to best handle flood damaged pianos.

Pianos and particularly the critical soundboards and felts are highly hygroscopic; they will absorb a lot of water. If an upright piano has been standing in water the lower edge of the soundboard will rapidly have taken on large amounts of water by capillary action, essentially the timber tubular cell structure will have sucked it up. **Pianos that have been standing in water are a write off.**

Even with careful slow drying (so that the absorbed moisture can evaporate molecule by molecule from the cells of the soundboard) **each and all of the following permanent problems can occur:**

- The soundboard will have expanded and the timber crushed itself thereby reducing its ability to function as a soundboard.
- Every glue joint in the piano must be considered suspect.
- If the cabinet is made of composite board (and most modern ones are) they will likely become like crumbly weet-bix.
- The strings, if not already rusty will corrode and will break prematurely. Bridge pins will be loose as the timber surrounding them will have swollen and crushed against them, with a corresponding loss of tone clean tone.
- Key bushings will swell or become un-glued; the action centers will swell and stick.
- Water will have swollen the felts. The action felts will harden after drying some may become unglued. In the case of hammer felts, after they dry they will have lost the resilience or elasticity necessary to develop good resonant tone.
- Other metal components will corrode. Key pins, tuning pins, pedal gear etc.

If you are called to assess a flood damaged instrument all the above must be considered likely to have happened or likely to happen in the future even if there is only small obvious damage at the moment. This must be taken into consideration when giving advice to insurance companies or owners. Even if the instrument was adjacent to a wet area much of the above can have happened with the high ambient humidity.

If you have been called by the insurance company, make a written assessment if possible with digital photos of obvious damage. Report the obvious damage plus highlight all the likely future consequences of the wetting. Send the report with invoice; remember you are acting for the insurance company. Given all the above, in many cases you will need to recommend the piano is not worth repairing. In which case make an assessment of fair market value, pre-flood, and also include a cost estimate the cost of a new (equivalent if necessary replacement instrument. It is for the insurance company and the owner to process the information you provide.

Repairing flood damaged instruments. If the owner insists the instrument be repaired, the insurance company should pay the agreed value of the instrument. The owner can then if they wish engage you to make repairs. Be very careful to highlight to the owner **in writing** all the above possible future problems with flood damaged instruments and make sure the repairs are noted as the "**owners liability**".

Under floor heating is detrimental to pianos. Tuning stability is frequently a problem when pianos or grands stand on under floor heating. If the heating area under the piano cannot be turned off, the best solution is to install a climate control system in the piano.